

In the above amendment, claims 17, 25 and 27 are cancelled, claims 19, 20, 28 and 29 are amended, and claims 30 - 32 are added.

REMARKS

This is in response to the first Office Action on the merits mailed April, 4, 2005.

Allowable Subject Matter

On page 1, item 5 of the April 4, 2005 first Office Action, method claims 1-15 were indicated as allowable. Applicants appreciate the indication of allowable subject matter.

Rejection under 35 U.S.C. §112

On page 2, item 2 of the April 4, 2005 first Office Action, claims 19, 20, 25, 27, 28 and 29 were rejected under the second paragraph of 35 U.S.C. §112 as failing to particularly point out and distinctly claim what applicants regard as their invention. In the current amendment, claims 25 and 27 are cancelled and claims 19, 20, 28 and 29 are amended. These amendments overcome this indefiniteness rejection. Reconsideration and withdrawal of the rejection of claims 19, 20, 28 and 29 under 35 U.S.C. §112, second paragraph is respectfully requested.

Claim Rejections – 35 U.S.C. §103

On page 3, item 4 of the April 4, 2005 first Office Action, claims 16-29 were rejected under 35 U.S.C. §103(a) as obvious over Bissell (U.S. Patent No. 660,787) in view of Ellis (U.S. Patent No. 2,399,478), Contini (U.S. Patent No. 6,067,660) and Conrad (U.S. Patent No. 3,662,878).

The four applied references Bissell, Ellis, Contini and Conrad, alone or in combination, do not disclose or suggest an embroidered portion on a crocheted surface of a crocheted ball or object of substantially spherical shape as recited in claims 16-29. Ellis, Contini and Conrad sew fabric to flat crocheted objects utilizing sewing access to both front and back surfaces of the flat crocheted objects. None of these references would have lead one of ordinary skill to apply embroidery to a crocheted ball. It would have been impossible to apply the

embroidery of Ellis, Contini and Conrad to the crocheted fabric covered ball of Bissell because there would have been no access to the inside surface to sew the embroidery under all prior art sewing conventions at the time of the invention.

The applicants of the claimed inventions have solved the problem of applying embroidery to the surface of a crocheted ball. Embroidery is sewed onto an initial disc and further crocheting forms a sphere. It is not until the crocheted ball is completed -- filled with a filling and crocheted shut -- before a full spherical shape is attained. The "elastic" nature of the crocheted stitches causes the deformation of the previously flat disc such that a new class of object may be embroidered upon -- spherical objects.

The U.S. Patent Office has issued numerous patents to those attempting to solve the dilemma of embroidering upon non-planar surfaces, such as clothing and caps. In the direct embroidery process, these solutions all utilize frames, hoops or some other supporting apparatus to hold the fabric to be embroidered. The background information as found in Patent 6,394,012 by French, et al. describe very well the conundrums with direct embroidery processes. In all of these cases, the support base holds the fabric from behind the article being directly embroidered upon. Nowhere has an embroidery process succeeded upon a ball due to difficulty in placing a clamp or hoop behind the fabric medium. In the case of crocheted balls, the small opening does not provide adequate space for utilizing these conventional solutions.

Applicants thus contend that these and the other apparatus claims to the object itself are patentable independent of the method because such construction of embroidery on a crocheted ball was not heretofore possible without the initial disc contribution of the present inventors. The initial disc itself, in claims 21, 30 and 31, can be observed on a ball and can be readily distinguished from the further crocheted portion. Furthermore, the direct embroidery process upon the initial disc can be readily identified from other embroidery process solutions such as the Schifeli patch and glued patches which do not become integral connected parts of the crocheted fabric.

The initial disc invention in the prior art is not a crocheted ball. The ball object claims are

embroidery of Ellis, Contini and Conrad to the crocheted fabric covered ball of Bissell because there would have been no access to the inside surface to sew the embroidery under all prior art sewing conventions at the time of the invention.

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needle be pushed *through* the medium being embroidered upon, then pushed back. In a spherical object, there is no *access* to the inside of the sphere. Ellis teaches that their invention “joined to the body of the article by the passage therethrough of the contiguous crochet stitches of said article” (Column 2, lines 42-44).

Ellis and Contini both show flat objects to which embroidery is being placed. In fact, Contini teaches that “the method may be used with a garment, a tablecloth, a quilt, fabric art, or other flexible textile object.” (Column 2, lines 13-14) All these mentioned objects are flat or provide ample access to the back side of said garment to receive a sizeable needle on the backside during the conventional embroidery process.

Contini also teaches away from the present inventions but hints to the limitations: “the attachment . . . is preferably accomplished by sewing . . . Other attachment methods may be used, e.g. embroidery, gluing, weaving . . . there are numerous other attachment methods that would be readily identifiable to those skilled in the art.” (Column 3, lines 14-19) However, except for gluing, these attachment methods are upon a “traditional” object that is capable of sewing access to both front and back sides for needles to pierce the object, then reversed back through, which is how embroidery is accomplished, or in the case of modern embroidery equipment, utilizing a frame or hook base.

Conrad describes patches to form embroidery. Conrad acknowledges that embroidery is generally worn “on garments for purposes of identification or ornamentation” for various applications like uniforms for athletic teams and other groups. (Column 1, lines 1-10). And “such embroidered emblem patches are generally secured to a garment by sewing it by its edges to the garment or by pressing them on the garment with an interposed layer of thermoplastic adhesive or glue.” (Column 1, lines 23-26).

The mere fact that there are two methods of application for embroidered patches reveals the initial method, sewing, is not appropriate in some applications, such as when dealing with spherical objects. In fact, the Schiffli embroidered patch was a glued-on solution created to address the many difficulties encountered during traditional embroidering applications. A Schiffli patch is in fact, already embroidered onto another piece of material, usually a thermoplastic medium that permits ironing or gluing upon the target object, say a thick uniform sleeve, that is too difficult to access using traditional embroidery methods. It is either impossible due to space limitations, or too difficult and/or time consuming to poke a needle through a jacket sleeve, then reverse that needle and poke it back through, multiple times, when affixing an embroidered patch. The space is

too confined and manual effort far too costly. And machine embroidered methods present even greater difficulty in locking the embroidery hoop backing inside the jacket sleeve due to space constraints. So the Schiffli glued-on solution was invented to solve this dilemma.

Conrad eloquently summarizes the benefits of his glued-on invention which mirrors the benefits of the pending claims: "It will be readily apparent that such article affords convenient and attractive marketing means for the manufacturer, at relatively low cost, and that it also affords great convenience to the purchaser in facilitating the attaching of the patch to a garment." (Column 2, lines 44-48). A difference is that the Applicants' claimed inventions are directed to crocheted spherical objects using sewn embroidery.

Finally, the Bissell patent from 1900, although an excellent example of a type of crocheted ball, is incapable of having a traditionally sewn embroidery portion on top of the competed crocheted netting because it "is constructed with a resilient body or center, such an ordinary tennis ball or rubber ball" (lines 24-26). So the interior cavity space in this patent is occupied by an object thus prohibiting a needle to be pushed through and then back as in traditional embroidery methods. Gluing a patch on top of the ball of Bissell is not a relevant matter to the claimed inventions.

The dependent claims contain the limitations of their corresponding independent claims and are patentable over Bissell, Ellis, Contini and Conrad for the reasons discussed above. Furthermore, the dependent claims contain additional limitations which are not taught or suggested by Bissell, Ellis, Contini and Conrad. Applicants have discovered size constraints on the initial disc relative to the further crocheted portion for holding the embroidered portion as recited in dependent claims 16, 18 and 22. The recited maximum dimension of the embroidered portion having a diameter of no greater than about 30% of a circumference (Claims 16), the recited maximum dimension of the embroidered portion having a diameter of no more than approximately 2.25 inches and the spherical shape having a circumference of approximately 7.5' inches (claim 18) and the recited additional crocheted rows forming sides of around 36% to around 46% of a total number of crocheted rows of the spherical crocheted object (claim 22) further describe properties of the object not subject to any method of making.

Accordingly, reconsideration and withdrawal of the rejection of claims 16-29 under 35 U.S.C. §103(a) over Bissell, Ellis, Contini and Conrad is respectfully requested.

Conclusion

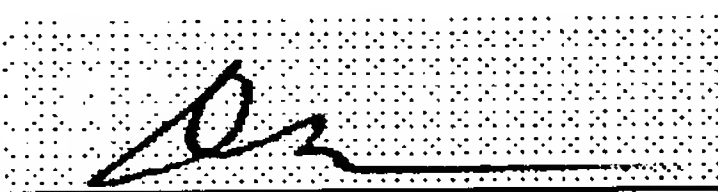
All the issues in the April 4, 2005 first Office Action have been addressed. Favorable consideration of the present application is requested. If any issues remain, the Examiner is invited to call the undersigned.

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 6, 2005.